AMENDMENTS TO THE CLAIMS

Claims 1-63 (Canceled)

64. (new) A method for inducing intracellular hyperthermia in a subject comprising the step of administering an amount of a mitochondrial uncoupling agent sufficient to the subject to induce whole body intracellular hyperthermia in the subject, wherein the induced intracellular hyperthermia is used to treat or diagnose cancer selected from the group consisting of prostate carcinoma, glioblastoma multiform, Kaposi's sarcoma, peritoneal carcinomatosis, and glioma.

65. (new) The method of claim 64, wherein the mitochondrial uncoupling agent is 2,4 dinitrophenol.

66. (new) The method of claim 64, wherein the mitochondrial uncoupling agent is 2,4 dinitrophenol, clofazimine, albendazole, cambendazole, oxibendazole, triclabendazole (TCZ), 6-chloro-5-[2,3- dichlorophenoxyl]-2- methylthio-benzimidazole, thiobendazole, rafoxanide, bithionol, niclosamide, eutypine, (+)usnic acid, vulpinic acid, atranorin, 2', 5-dichloro-3-t-butyl- 4'-nitrosalicylanilide (S- 13), 3, 4', 5-trichlorosalicylanilide (DCQ, platanetin, 2- trifluoromethyl-4, 5, 6, 7- tetrachlorobenzimidazole (TTFB), 1799, AU-14 21, 3,4,5,6,9,10-hexahydro- 14,16-dihydroxy-3- methyl-IH-2-benzoxacyclotetradecin-1,7(8H)-dione (zearalenone), N,NI-bis- (4- trifluoromethylphenyl)-urea, resorcylic acid lactones, 3,5-di-t-butyl- hydroxybenzylidenemalononitrile(SF6847), 2,2,-bis (hexafluoroacetonyl) acetone, triphenyl boron, carbonylcyanide 4-trifluoromethoxyphenylhydrazone (FCCP), tributylamine (TBA), carbonyl cyanide 3-chlorophenylhydrazone (CICCP), 1, 3, 6, 8- tetranitrocarbazole, tetrachlorobenzotriazole, 4-iso-octyl-2,6-dinitrophenol(Octyl-DNP), 4- hydroxy-3,5- diidobenzonitrile, mitoguazone (methylglyoxal bisguanylhydrazone), pentachlorophenol (PCP), 5-chloro-2-mercatobenzothiazole (BZT-SH), tribromoimidazole (TBI), N-(3-trifluoromethylphenyl)-anthranilic acid (Flufenamic acid), 4-nitrophenol, 4, 6-dinitrocresol, 4- isobutyl-2,6-dinitrophenol, 2-azido-4-nitrophenol, 5-nitrobenzotriazole, 5-chloro-4- nitrobenzotriazole, tetrachlorobenzotriazole, methyl-o-phenylhydrazone, N-phenylanthranilic acid, N-(3-nitrophenyl)anthranilic acid, N-(2,3-dimethylphenyl) anthranilic acid, mefenamic acid, diflunisal, flufenamix acid, N-(3-chlorophenyl)

anthranilic acid, carbonyl cyanide 4- trifluoromethoxyphenylhydrazone (FCCP), SR-4233 (Tirapazamine), atovaquone, carbonyl cyanide 4-(6'-methyl-2'-benzothiazyl)-phenylhydrazone(BT-CCP), ellipticine, olivacine, ellipticinium, isoellipticine, methyl-0-phenylhydrazonocyanoaceticacid,methyl-O-(3-chlorophenylhydrazono) cyanoacetic acid, 2-(3'- chlorophenylhydrazono)-3-oxobutyronitrile, thiosalicylic acid, 2-(2',4-dinitrophenylhydrazono)- 3-oxo-4,4-demethylvaleronitrile, relanium, melipramine, unsaturated fatty acids (up to C14 Optimum), sulflaramid, metabolite perfluorooctane sulfonamide (DESFA), perfluorooctanoate, clofibrate, Wy- 14, 643, ciprofibrate, fluoroalcohols, gramicidin, nigericin, tyrothricin, tyrocidin, valinomycin, alamethicins, harzianin HA V, saturnisporin SA IV, zervarnicins, magainin, cecropins, melittin, hypelcins, suzukacillins, monensins, trichotoxins, antiamoebins, crystal violet, cyanine dyes, cadmium ion, trichosporin-B, desaspidin, ionized calcium (Ca++), UCPI-l, UCP-2, UCP-3, PUMP (Plant Uncoupling Mitochondrial Protein), histones, polylysines, A206668-a protein, or compound K23187.

67. (new) The method of claim 64, wherein the mitochondrial uncoupling agent is a conjugate comprising 2,4 dinitrophenol.

68. (new) The method of claim 64, wherein an animal is administered the mitochondrial uncoupling agent and a separate medication is administered, wherein the second medication increases the overall metabolic rate of the animal, the metabolic rate of a specific target tissue in the animal, or an increase in free radical flux.

69. (new) The method of claim 68, wherein the second medication is selected from the group consisting of glucagon, arbutamine, dobutamine, vasopressin, glutamine, proline, octanoate, methylene blue (tetramethylthionine), ubiquinone, menadione, hematoprophyrin, polyunsaturated fatty acids, monounsaturated fatty acids and a combination thereof.

70. (new) The method of claim 64, wherein the induced intracellular hyperthermia involve the induction of heat shock proteins.

71. (new) The method of claim 64 further comprising administering an anti-cancer agent selected from the group consisting of metholtrexate, mercaptopuorine, fluorouracil, cytarabine, thioguanine, azacitidine, etoposide (VP-16) and teniposide (VM-26),

vincristine, vinblastine, paclitaxel, busulfan, cyclophosphamide, mechlorethamine, melphalan, altaretarnine, ifosfamide, cisplatin, dacarbazine, procarbazine, lomustine, carmustine, lomustine, semustine, chlorambucil, thiotepa, carboplatin; flutamide, prednisone, ethinyl estradiol, diethylstilbestrol, hydroxyprogesterone caproate, medroxyprogesterone, megestrolacetate, testosterone, fluoxymesterone, diiodothyroidine, triiodothyroidine, tetraiodothyroidine, aromatase inhibitor, amino glutethimide, octreotide, goserilin acetate, leuprolide, interferon alpha-2a, interferon alpha-2b, interferon-gamma, interferon-beta, interleukin-1, interleukin-2, interleukin-4, interleukin-10, anti-HER-2/neu humanized antibody, tumor necrosis factor, granulocyte-macrophage colony-stimulating factor, macrophage-colony- stimulating factor, phenylacetates, retinoic acids, leukotrines, thromboxanes, and a combination thereof.

72. (new) The method of claim 64 further comprising administering radiation.

73. (new) A method for inducing intracellular hyperthermia in a subject comprising the step of administering an amount of a mitochondrial uncoupling agent sufficient to the subject to induce whole body intracellular hyperthermia in the subject, wherein the induced intracellular hyperthermia is used to treat or diagnose infections that result from Borrelia burgdorferi, Mycobacterium leprae, Treponema pallidum, HIV, hepatitis C, herpes virus or papillomavirus.

74. (new) The method of claim 73, wherein the mitochondrial uncoupling agent is 2,4 dinitrophenol.

75. (new) The method of claim 73, wherein the mitochondrial uncoupling agent is a conjugate comprising 2,4 dinitrophenol.

76. (new) The method of claim 73, wherein an animal is administered the mitochondrial uncoupling agent and a separate medication is administered, wherein the second medication increases the overall metabolic rate of the animal, the metabolic rate of a specific target tissue in the animal, or an increase in free radical flux.

77. (new) The method of claim 73, wherein the induced intracellular hyperthermia involve the induction of heat shock proteins.

78. (new) The method of claim 73 further comprising administering an anti-bacterial agent selected from the consisting of betalactam, macrolide, tetracycline, aminoglycoside, peptide antibiotic, sulfonamide, quinolone, nucleoside, oligosaccharide, polyene, nitrofuran, and a combination thereof.

79. (new) The method of claim 73 further comprising administering an antiviral agent selected from the group consisting of amantadine, rimantadine, arildone, ribaviran, acyclovir, abacavir, vidarabine (ARA-A) 9-1,3-dihydroxy-2-propoxy methylguanine (DHPG), ganciclovir, enviroxime, foscarnet, ampligen, podophyllotoxin, 2,3-dideoxytidine (ddQ, iododeoxyuridine (IDU), trifluorothymidine (TIFT), dideoxyMosine (ddi), d4T, 3TC, zidovudine, efavirenz, indinavir, saquinavir, ritonavir, nelfinavir, amprenavir, and a combination thereof.

80. (new) A method for inducing intracellular hyperthermia in a subject comprising the step of administering an amount of a mitochondrial uncoupling agent sufficient to the subject to induce whole body intracellular hyperthermia in the subject, wherein the induced intracellular hyperthermia is used to treat or diagnose an infestation that results from Candida, Sporothrix schenkii, Histoplasma, paracoccidiodes, Aspergillus, Leishmania, malaria, acanthomoeba or cestodes.

81. (new) The method of claim 80 further comprising administering an antifungal agent selected from the group consisting of Amphotericin B, Griseofulvin, Fluconazole (Diflucan), Intraconazole, 5 fluro-cytosine (Flutocytosine, 5-FC), Ketatoconazole and Miconazole.

82. (new) The method of claim 80, wherein the mitochondrial uncoupling agent is 2,4 dinitrophenol.

83. (new) The method of claim 80, wherein the mitochondrial uncoupling agent is a conjugate comprising 2,4 dinitrophenol.

84. (new) The method of claim 80, wherein an animal is administered the mitochondrial uncoupling agent and a separate medication is administered, wherein the second medication increases the overall metabolic rate of the animal, the metabolic rate of a specific target tissue in the animal, or an increase in free radical flux.

85. (new) The method of claim 80, wherein the induced intracellular hyperthermia involve the induction of heat shock proteins.